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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,306	10/17/2003	Yan Borodovsky	10559/879001/P17481	8888
20985	7590	03/22/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			FULLER, RODNEY EVAN	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,306

Applicant(s)

BORODOVSKY, YAN

Examiner

Rodney E. Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 16-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

RODNEY FULLER
PRIMARY EXAMINER

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II (claims 10-15) in the reply filed on December 27, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because the abstract is related to "Systems and techniques for printing substrates" while the claims are directed toward "a device" with an arbitrary arrangement of features. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 10-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Regarding claim 10, the limitation "arrangement of features" is unclear. The limitation "the features defined with a definition characteristic of interference lithography" is overly broad and uncertain. As an example, the limitation could be interpreted to be characteristics of a device produced by interference lithography; or alternatively, the limitation could be interpreted to be characteristics of the interference lithography equipment.

8. Claims 11-15 depend from claim 10 and therefore include the deficiencies of claim 10.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by
Brueck, et al. (US 6,042,998).

As best the examiner is able to ascertain the claimed invention, Brueck discloses all the structures set forth in the claims.

Regarding claim 10, Brueck discloses "a substantially arbitrary arrangement (column 6, line 36) of features, the features defined with a definition characteristic of interference lithography (column 6, line 28)."

Regarding claim 11, Brueck discloses "wherein the substantially arbitrary arrangement of features comprises features printed with a pitch approaching one half the wavelength (column 5, lines 64-65) of a patterning electromagnetic radiation."

Regarding claim 12, Brueck discloses "wherein the substantially arbitrary arrangement of features comprises features free from defects arising due to one or more of lens imperfections and mask imperfections." (This limitation is inherent in an interference lithography system as noted by applicant in the specification on page 8, line 22 to page 9, line 3.)

Regarding claim 13, Brueck discloses "wherein the substantially arbitrary of arrangement of features comprises features free from defect arising due to backscatter of electrons." (This limitation is inherent in an interference lithography system as noted by applicant in the specification on page 8, line 22 to page 9, line 3.)

Regarding claim 14, Brueck discloses "wherein the substantially arbitrary arrangement of features comprises a portion of a microelectronic device." (abstract, lines 19-21)

Regarding claim 15, Brueck discloses "wherein the portion of the microelectronic device comprises a portion of an SRAM memory device." (abstract, lines 19-21)

11. Claims 10 and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Mermelstein (US 6,548,820).

As best the examiner is able to ascertain the claimed invention, Brueck discloses all the structures set forth in the claims.

Regarding claim 10, Mermelstein discloses "a substantially arbitrary arrangement of features (column 3, line 37), the features defined with a definition characteristic of interference lithography (column 3, lines 31-32)."

Regarding claim 12, Mermelstein discloses "wherein the substantially arbitrary arrangement of features comprises features free from defects arising due to one or more of lens imperfections and mask imperfections." (This limitation is inherent in an interference lithography system as noted by applicant in the specification on page 8, line 22 to page 9, line 3.)

Regarding claim 13, Mermelstein discloses "wherein the substantially arbitrary of arrangement of features comprises features free from defect arising due to backscatter of electrons." (This limitation is inherent in an interference lithography system as noted by applicant in the specification on page 8, line 22 to page 9, line 3.)

Regarding claim 14, Mermelstein discloses "wherein the substantially arbitrary arrangement of features comprises a portion of a microelectronic device." (column 1, line 26)

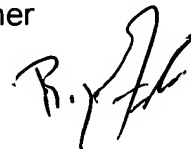
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E. Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller
Primary Examiner
Art Unit 2851



March 17, 2005